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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,812	10/22/2003	Larrie A. Deardurff	200208855-1	6319

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FORT COLLINS, CO 80527-2400

EXAMINER
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FAISON, VERONICA F

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/691,812

Applicant(s)

DEARDURFF, LARRIE A.

Examiner

Veronica F. Faison

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 35-44 is/are allowed.  
6) ☒ Claim(s) 1,2,9-13,16-22,24-26,28-31 and 34 is/are rejected.  
7) ☒ Claim(s) 3-8,14,15,23,27,32 and 33 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

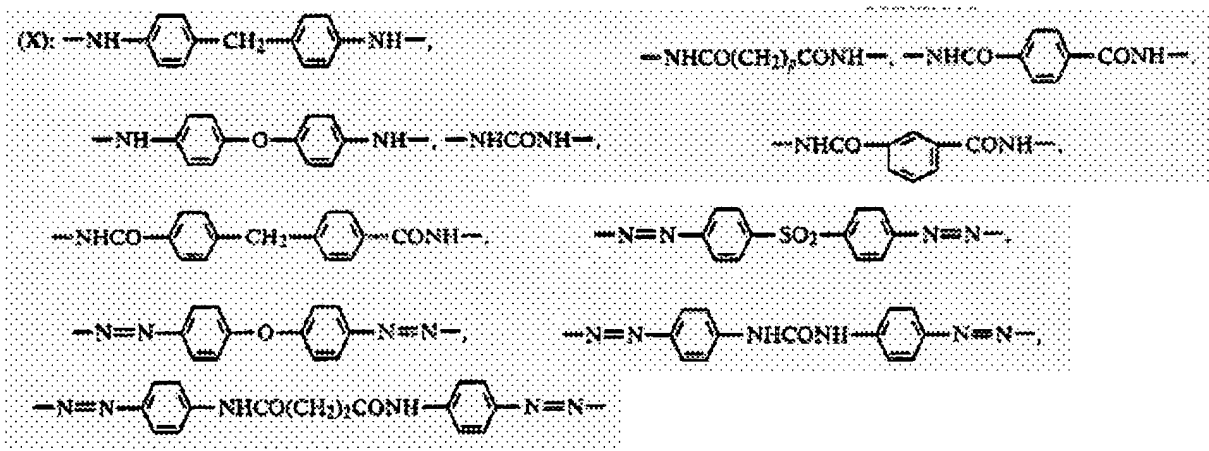
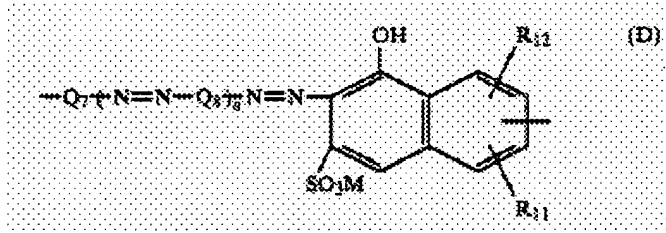
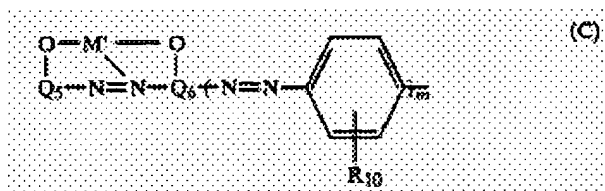
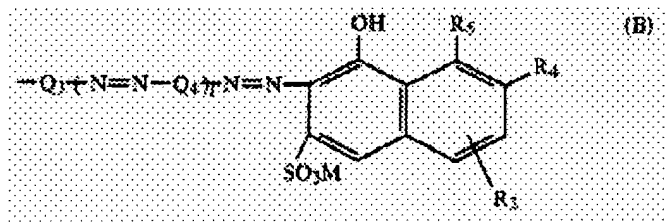
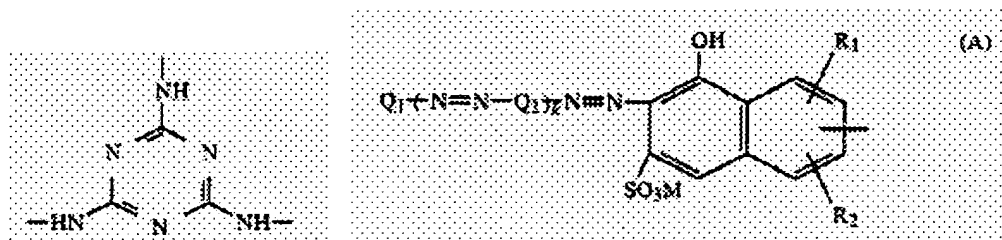
Claims 1 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1, line 5 and claim 25, line 7 recite "combinations thereof" which has no literal antecedent basis is seen in the specification.

### ***Claim Rejections - 35 USC § 103***

Claims 1, 2, 9-13, 16-22, 24-26, 28-31, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eida et al (US Patent 4,804,411) in view of Okada et al (US Patent 6,783,223).

Eida et al teach a recording liquid comprising a solution of a recording agent. The recording agent has a structure containing a plural number of structural units linked together through a linking group or groups. The structural unit may be a dye residue (abstract and col. 2 lines 23-32). The structural units refer to the dye residues represented by the formulae (A), (B), (C) and (D) and the linking group to the groups represented by the following formulae (X), (Y), (Z):

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(Z):  $\text{—NHCONH—, —NH—, —CH=CH—, —N=N—, —COO(CH}_2\text{)}_2\text{OCO—}$ . The reference further teaches that the dye content is in the amount of 1 to 10 percent by weight (col. 37 lines 39-49). The ink composition has excellent recording characteristics such as stability during prolonged storage, ejection stability, ejection response particularly as an ink to be used for ink jet system (col. 39 line 66-col. 40 line 6). The reference fails to teach interfering metals selected from the group consisting of aluminum, one or more transition metal and combinations thereof.

Okada et al (US Patent 6,783,223) teaches an apparatus having an ink jet head provided therein with an ink flow passage formed of nickel (transition metal) or nickel alloy, wherein the ink comprises water, water-soluble organic solvent and coloring agent (abstract and col. 2 lines 7-15). The reference further teaches that the metal member may be a nozzle plate, an ink supply plate, a vibration plate and a chamber plate which may be nickel (transition metal), nickel alloy, stainless steel, copper (transition metal) and titanium alloy (col. 3 lines 43-57).

Therefore it would have been obvious to one of ordinary skill in the art to use the ink composition of Eida et al in the ink jet apparatus of Okada et al because the ink composition of Eida et al as taught ink composition has excellent recording characteristics such as stability during prolonged storage, ejection stability, ejection response particularly as an ink to be used for ink jet system.

***Allowable Subject Matter***

Claims 3-8, 14, 15, 23, 27, 32 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The references alone or in combination fail to teach the specific dyes and linking groups set forth in claims listed above.

Claims 35-44 are allowed.

The following is an examiner's statement of reasons for allowance:

The references alone or in combination fail to teach a system comprising (a) an alumina or silica-containing porous media substrate; (b) an ink jet ink comprising a first dye molecule chemically coupled to a second dye molecule through a linker group, said multimeric dye as whole being substantially stable in the presence of interfering metals present in the alumina- or silica containing porous media substrate, and (c) an ink jet pen configured for jetting the ink jet ink onto the alumina- or silica-containing porous media substrate. Therefore the references are not seen to teach or fairly suggest the claimed invention.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 2, 9-13, 16-22, 24-26, 28-31, 34 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

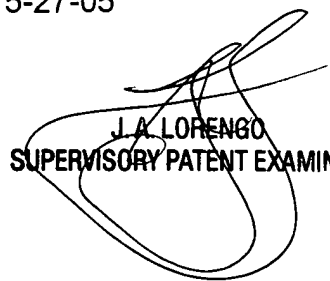
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VFF  
5-27-05

  
J.A. LORENZO  
SUPERVISORY PATENT EXAMINER